

release notes

hp StorageWorks Secure Path v3.1C for Windows on Raid Array 4100/4000

Product Version: 3.1C

Fifth Edition (May 2004)

Part Number: AA-RNOCE-TE

This document summarizes the features and characteristics of HP StorageWorks Secure Path Version 3.1C for 32-bit Microsoft Windows Server 2003, a High-Availability software solution for use with StorageWorks RA 4100/4000.

For the latest version of these Release Notes and other Secure Path documentation, access the HP storage website at <http://h18006.www1.hp.com/products/sanworks/secure-path/index.html>.



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Secure Path V3.1C for Windows on RAID Array 4100/4000 Release Notes
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Release notes content

These Release Notes cover the following major topics:

- [Notes and corrections](#), page 4
- [Secure Path guidelines](#), page 5
- [Secure Path operational features](#), page 6
- [Configuration information](#), page 8

Other Secure Path V3.1C for Windows on RAID Array 4100/4000 documentation

The Secure Path V3.1C for Windows on RAID Array 4100/4000 documentation includes:

- *HP StorageWorks Secure Path V3.1C for Windows on RAID Array 4000/4100 Installation Guide*, part number AA-RN0DC-TE
- *HP StorageWorks Secure Path Manager V3.1C for Windows on RAID Array 4000/4100 Release Notes*, part number AA-RN0CD-TE (this document)

Notes and corrections

- To manually repair a path under the Secure Path Manager, you must repair the condition that caused the path failure by performing the following procedure:
 1. In the Secure Path Manager, select the broken path.
 2. Choose **Verify**.
 3. If the path verification pop-up box indicates successful completion of path verification, select **Repair**.

Manual repairs may initially appear to work even if there is a path problem, but eventually reverts back to a broken state under Secure Path Manager.

- Due to the extended error checking features inherent to Secure Path software, there may be some delay with SPM failed path reporting.
- In a Windows installation, the addition of new LUNs may cause the hardware wizard to display an error in initializing the LUNs, and yellow warning signs may show up in the device manager. This is resolved by rebooting the system.
- When dynamically adding new LUNs to a host, a rescan is required for the driver stack to be rebuilt properly.
- When using Secure Path V3.1C for Windows on RAID Array 4100/4000 with HP StorageWorks FC-AL switches, if a path fails and is repaired, the path may not be recognized until the switch is rebooted.

Secure Path guidelines

- HP recommends that you uninstall the devices (LUNs) from the device manager first, before deleting the devices using the Array Configuration Utility. If you do not, Secure Path Manager sees the deleted devices as failed devices with the subsystem shown in a degraded state. In these situations, HP recommends using *SpCleanUpLuns* to clean up all the devices (LUNs) that are in failed state. Refer to the *HP StorageWorks Secure Path V3.1C for Windows on RAID Array 4000/41000 Installation Guide* for detailed information about using *SpCleanUpLuns*.
- Booting from Secure Path devices is not supported.
- Secure Path Manager (SPM) passwords for all hosts in a profile must be the same.
- Changing the Agent's list of authorized clients or passwords requires that the Agent be manually stopped and restarted.
- Modifications to device volume labels made with Windows Disk Manager require that the Agent be manually stopped and restarted before they become visible in SPM.

Secure Path installation

The following procedure is the preferred method for Secure Path installation. It varies from the instructions published in the Secure Path Installation and Reference Guide found on the release media. The instructions here take precedence.

If installing or upgrading a HP ProLiant Cluster HA/F200, refer to the instructions located in the cluster kit for complete installation details.

1. Install and configure all Windows servers and all HBAs, referencing the user documentation included with your hardware. Attach the HBAs to the applicable Fibre hubs or switches at this time.
2. Install the Windows Server 2003 operating system, using the SmartStart and RA4000/4100 SAN Solution Software Version as described [Table 1](#).
3. If your RA4000/4100 storage systems were not configured during the initial SmartStart assisted installation process, use the Array Configuration Utility (ACU), which was installed during the Windows 2003 Server installation process, to create storagesets and provide unit attributes for the required LUNs.

4. Using Windows Server 2003 Disk Management, configure your basic disk partitions as required.
5. Install the Secure Path V3.1C for Windows for RA4000/4100 software. You are prompted to restart the server after the installation process is complete.

Following system reboot, verify the Windows Event Log shows a successful RaiDisk driver start event. As shown in the following example:

```
Verify the Windows Server 2003 application Event Log shows a  
successful Secure Path Agent start event.
```

Secure Path operational features

Secure Path Manager Refresh

SPM automatically refreshes the display every 90 seconds. If you wish to update the displayed information sooner use the F5 key.

Secure Path Manager controller designations

In the SPM display, controller designations are based on manufacturing designated serial numbers assigned to physical controllers in your RAID Array cabinet. This does not necessarily correlate to the physical position (upper and lower) of the controllers within the cabinet. Always reference the controller serial numbers if you need to associate information in the SPM display with the controllers.

Controller Hot-Replace

Auto-Failback and/or Path Verification can be either enabled (or disabled).

1. Remove either the **active** or **standby** RA4000/4100 Controller.
2. Disconnect fiber cable from removed controller.
3. Insert replacement controller
4. Wait for “heartbeat” (led #8 flashing) before continuing to [step 5](#).
(Allow several minutes for controller to come fully online.)
5. Connect fiber cable to the replaced RA4000/4100 Controller.
6. Rescan by either pressing F5 function key or by selecting View – Refresh under Secure Path Manager.
7. Note change in (replaced) controller serial number

Note: To swap a previously removed RA4000/4100 Controller into its original slot/location, you must reboot the system. In a clustered configuration, you can do so without taking the cluster offline by using proper failover/failback techniques and rebooting one server at a time.

Configuration information

Systems requirements

Table 1 lists the system requirements for Secure Path V3.1C installation.

Table 1: Secure Path system requirements

Host feature	Requirement
Operating Systems	Windows Server 2003
Secure Path Software Kit	Secure Path V3.1C for Windows on RAID Array 4000/4100
RAID Storage Systems	StorageWorks RAID Array 4000 StorageWorks RAID Array 4100 RA4100 Controller Firmware Version 2.60
Solution Software Kit	HP SmartStart and Support Software 6.30 HP Management Software 6.30
Host Bus Adapter	HP StorageWorks 64-bit 66 MHz PCI-to Fibre Channel Host Bus Adapter (Part Number 120186-B21)

Secure Path supported configurations

The following list defines operational configuration limits for Secure Path Version 3.1C. The effective limit may be less due to Windows storage constraints, storage system type, or interconnect requirements.

- Maximum one path per controller
- Maximum two paths per LUN
- Two of the controllers in a sub system must have the same firmware version.
- RA4000/4100 controllers cannot be shared by more than one cluster when using Windows Server 2003.
- Redundant RA4000/4100 controllers cannot be shared with non-redundant servers/clusters.
- RA4000/RA4100s owned by a Windows cluster cannot be shared with standalone servers.
- A server can only support a single or redundant path to the Storage Area Network (SAN). A server cannot attach to multiple SANs.

Note: For more information, refer to the StorageWorks RA4000/RA4100 Based San Solution User Guide.

- Special Considerations for using fabric switches on ProLiant HA/F100 or HA/F200 Clusters:
 - When implementing more than one cluster on the same SAN Switch infrastructure (that is, Multi-Clusters), zoning must be applied to isolate the clusters from each other to achieve the highest levels of stability. For more information, refer to <http://h18006.www1.hp.com/products/storageworks/san/documentation.html>.
 - For RA4100 SAN configurations with heavy I/O traffic, increase the fabric switch buffer capacity from the default value of 16 to 27. For more information, refer to <http://www.hp.com/country/us/eng/prodserv/storage.html>.
- Special Considerations for using a FC-AL switch on ProLiant HA/F100 or HA/F200 Clusters:
 - For optimum performance and stability, use port LIP propagation policies as follows: for each port connected to a server = Disabled (NOLIP) and for each port connect to storage = Enabled (LIP).
 - When using SAN and FC-AL Switches on the same network, powerup the SAN Switches before powering up the FC-AL Switch.

Fibre channel configurations

Refer to the *HP StorageWorks SAN Design Reference Guide*, for configuration information about:

- Supporting mixed HBAs.
- Maximum number of cascaded (serial) switches.
- Supporting a mix of fibre channel switches in the same configuration.

This document is available on the HP website at

<http://h18006.www1.hp.com/products/storageworks/san/documentation.html>.